



Circuit breaker size S3 for motor protection, Class 20 A-release 45...63 A  
N-release 819 A screw terminal Increased switching capacity 100 kA

**product brand name**  
**product designation**  
**design of the product**  
**product type designation**

SIRIUS  
Circuit breaker  
For motor protection  
3RV2

### General technical data

<b>size of the circuit-breaker</b>	S3
<b>size of contactor can be combined company-specific</b>	S3
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	34 W
• at AC in hot operating state per pole	11.3 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
<b>surge voltage resistance rated value</b>	8 kV
<b>shock resistance according to IEC 60068-2-27</b>	25g / 11 ms Sinus
<b>mechanical service life (operating cycles)</b>	
• of the main contacts typical	25 000
• of auxiliary contacts typical	25 000
electrical endurance (operating cycles) typical	25 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	03/01/2017

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
relative humidity during operation	10 ... 95 %

### Main circuit

<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	45 ... 63 A
<b>operating voltage</b>	
• rated value	20 ... 690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	63 A
<b>operational current</b>	
• at AC-3 at 400 V rated value	63 A
• at AC-3e at 400 V rated value	63 A
<b>operating power</b>	

• at AC-3	— at 230 V rated value	18.5 kW
	— at 400 V rated value	30 kW
	— at 500 V rated value	37 kW
	— at 690 V rated value	55 kW
• at AC-3e	— at 230 V rated value	18.5 kW
	— at 400 V rated value	30 kW
	— at 500 V rated value	37 kW
	— at 690 V rated value	55 kW
<b>operating frequency</b>		
• at AC-3 maximum		15 1/h
• at AC-3e maximum		15 1/h
<b>Protective and monitoring functions</b>		
<b>product function</b>		
• ground fault detection		No
• phase failure detection		Yes
<b>trip class</b>		CLASS 20
<b>design of the overload release</b>		thermal
<b>maximum short-circuit current breaking capacity (Icu)</b>		
• at AC at 240 V rated value		100 kA
• at AC at 400 V rated value		100 kA
• at AC at 500 V rated value		15 kA
• at AC at 690 V rated value		7.5 kA
<b>operating short-circuit current breaking capacity (Ics) at AC</b>		
• at 240 V rated value		100 kA
• at 400 V rated value		50 kA
• at 500 V rated value		7.5 kA
• at 690 V rated value		4 kA
response value current of instantaneous short-circuit trip unit		819 A
<b>UL/CSA ratings</b>		
<b>full-load current (FLA) for 3-phase AC motor</b>		
• at 480 V rated value		63 A
• at 600 V rated value		63 A
<b>yielded mechanical performance [hp]</b>		
• for single-phase AC motor	— at 110/120 V rated value	5 hp
	— at 230 V rated value	15 hp
• for 3-phase AC motor	— at 200/208 V rated value	20 hp
	— at 220/230 V rated value	25 hp
	— at 460/480 V rated value	50 hp
	— at 575/600 V rated value	60 hp
<b>Short-circuit protection</b>		
<b>product function short circuit protection</b>		Yes
<b>design of the short-circuit trip</b>		magnetic
<b>Installation/ mounting/ dimensions</b>		
<b>mounting position</b>		any
<b>fastening method</b>		screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
<b>height</b>		165 mm
<b>width</b>		70 mm
<b>depth</b>		176 mm
<b>required spacing</b>		
• with side-by-side mounting at the side		0 mm
• for grounded parts at 400 V	— downwards	70 mm
	— upwards	70 mm
	— at the side	10 mm
• for live parts at 400 V	— downwards	70 mm

— upwards	70 mm
— at the side	10 mm
• for grounded parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 mm
• for live parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 mm

## Connections/ Terminals

### type of electrical connection

- for main current circuit

### arrangement of electrical connectors for main current circuit

### type of connectable conductor cross-sections

- for main contacts

- solid
- solid or stranded
- finely stranded with core end processing
- finely stranded without core end processing

### tightening torque

- for main contacts for ring cable lug

### outer diameter of the usable ring cable lug maximum tightening torque

- for main contacts with screw-type terminals

screw-type terminals

Top and bottom

2x (2.5 ... 16 mm<sup>2</sup>)

2x (2.5 ... 50 mm<sup>2</sup>), 1x (10 ... 70 mm<sup>2</sup>)

2x (2.5 ... 35 mm<sup>2</sup>), 1x (2.5 ... 50 mm<sup>2</sup>)

2x (10 ... 35 mm<sup>2</sup>), 1x (10 ... 50 mm<sup>2</sup>)

4.5 ... 6 N·m

19 mm

4.5 ... 6 N·m

## Safety related data

### B10 value

- with high demand rate according to SN 31920

5 000

### proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

50 %

50 %

### T1 value for proof test interval or service life according to IEC 61508

10 a

### protection class IP on the front according to IEC 60529

IP20

### touch protection on the front according to IEC 60529 display version for switching status

finger-safe, for vertical contact from the front  
Handle

## Certificates/ approvals

### General Product Approval

### Declaration of Conformity



[Confirmation](#)



KC



### Declaration of Conformity

### Test Certificates

### Marine / Shipping



EG-Konf.

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other

Railway



LRS



[Confirmation](#)



[Vibration and Shock](#)

Railway

[Confirmation](#)

Further information

**Siemens has decided to exit the Russian market (see here).**

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

**Siemens is working on the renewal of the current EAC certificates.**

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

**Information on the packaging**

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2042-4JB10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4JB10>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

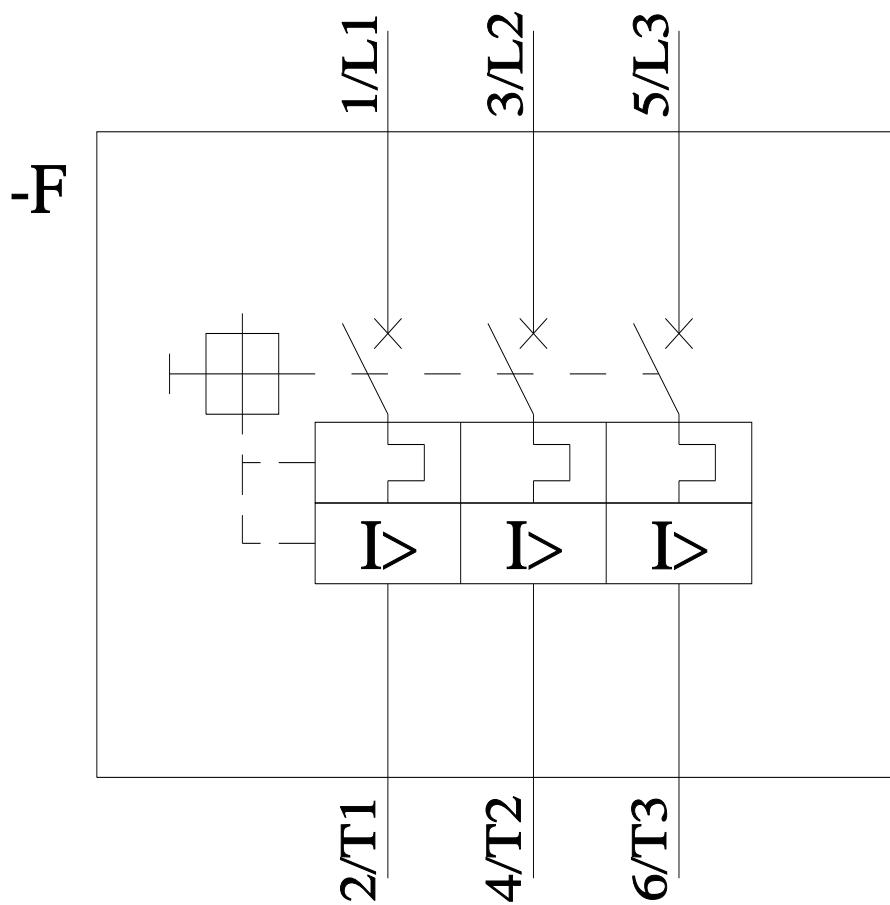
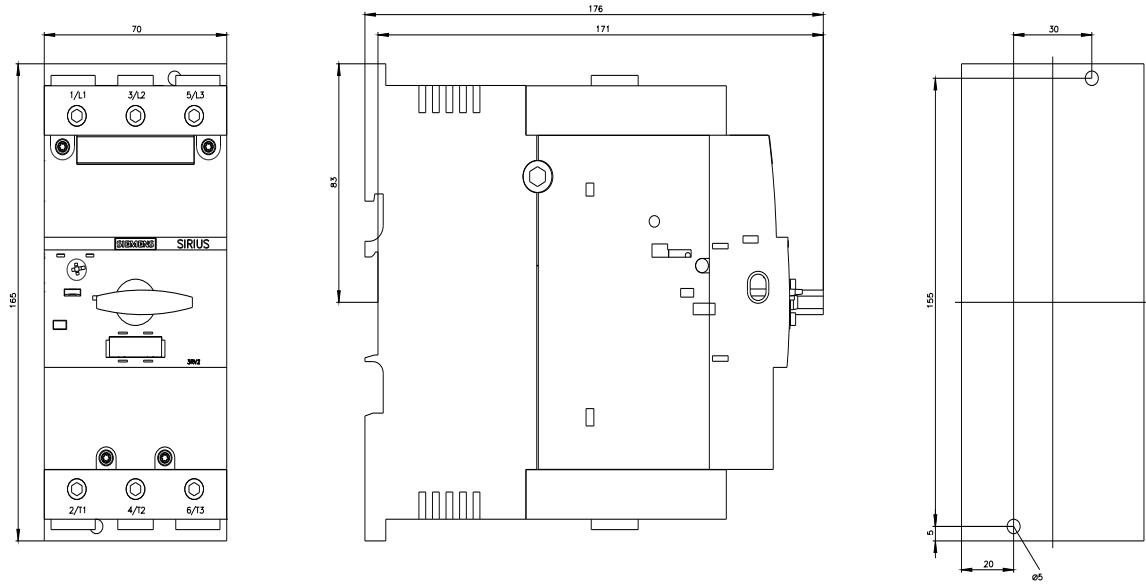
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2042-4JB10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4JB10&lang=en)

**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10/char>

**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JB10&objecttype=14&gridview=view1>



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